

ABSTRACT OF THE INVENTION

Regulation of expression of programmed cell death, including senescence, in plants is achieved by integration of a gene or gene fragment encoding senescence-induced deoxyhypusine synthase, senescence-induced eIF-5A or both into the plant genome in antisense orientation. Plant genes encoding senescence-induced deoxyhypusine synthase and senescence-induced eIF-5A are identified and the nucleotide sequences of each, alone and in combination are used to modify senescence in transgenic plants.